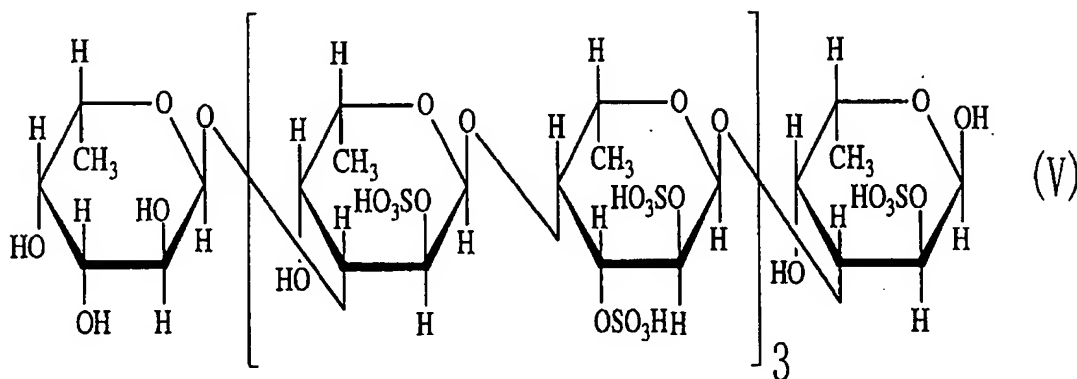


CLAIMS

1. A sulfated fucan-degrading enzyme that degrades a sulfated fucan derived from a brown alga of the order Fucales, which is obtainable from a culture of a bacterium of the genus *Fucophilus*.

2. The sulfated fucan-degrading enzyme according to claim 1, which is an endo-type α -(1-4)L-fucosidase having the following physical and chemical properties:

(I) acting on a sulfated fucan oligosaccharide of formula (V) to cleave an α -(1-4)L-fucosyl bond in an endo-type manner:



(II) having an optimal pH of about 6 to 8; and

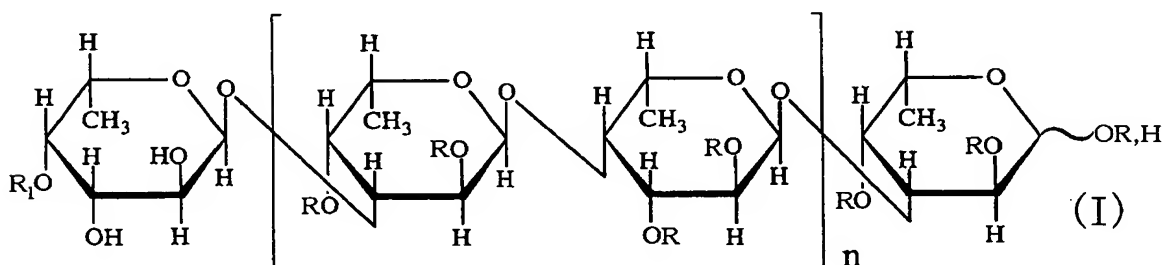
(III) having an optimal temperature of about 10 to 40°C.

3. A method for producing the sulfated fucan-degrading enzyme defined by claim 1, the method comprising culturing a bacterium of the genus *Fucophilus*, and collecting the enzyme from the culture.

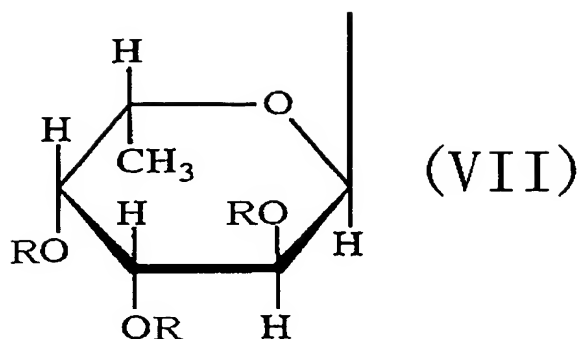
5 4. A sulfated fucan oligosaccharide which is obtainable by allowing the sulfated fucan-degrading enzyme defined by claim 1 to act on a sulfated polysaccharide derived from a brown alga.

10 5. A method for producing a sulfated fucan oligosaccharide, the method comprising allowing the sulfated fucan-degrading enzyme defined by claim 1 to act on a sulfated polysaccharide derived from a brown alga, and collecting a sulfated fucan oligosaccharide.

15 6. A saccharide of general formula (I) or a salt thereof:

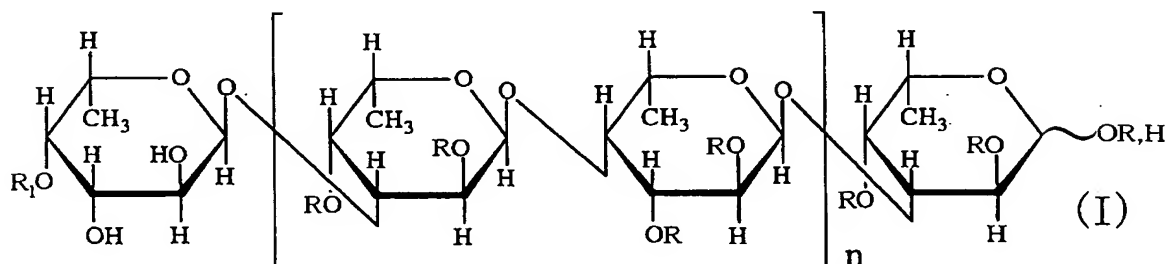


wherein R is H, SO₃H, CH₃CO or general formula (VII); R₁ is H, SO₃H or CH₃CO; at least one of Rs and R₁ is SO₃H; n is an integer of 1 or more:



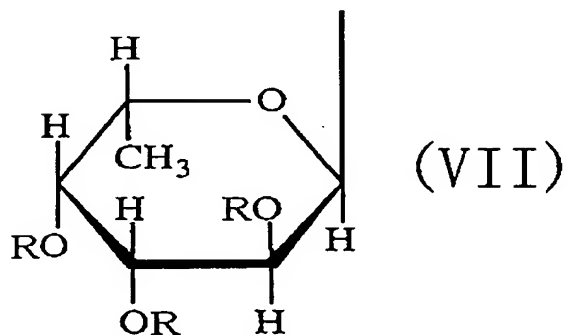
wherein R is H, SO₃H or CH₃CO.

7. A sulfated fucan oligosaccharide of general formula (I) or a salt thereof:



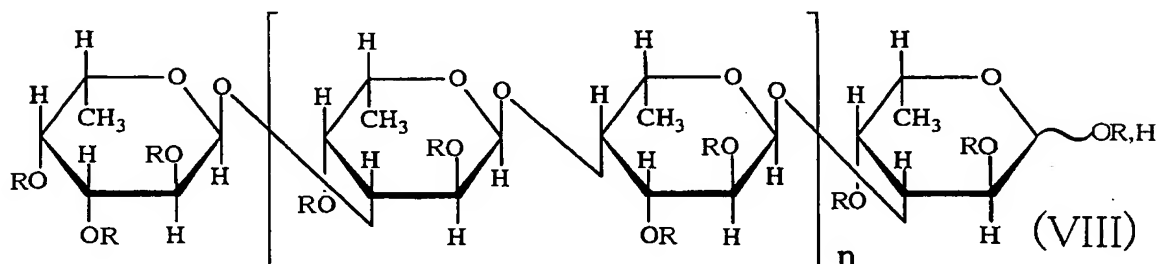
5

wherein R is H, SO₃H, CH₃CO or general formula (VII); R₁ is H, SO₃H or CH₃CO; at least one of Rs and R₁ is SO₃H; n is an integer of 1 to 4:

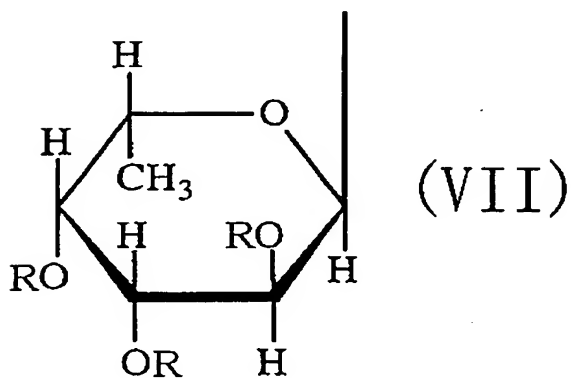


wherein R is H, SO₃H or CH₃CO.

8. A method for producing a sulfated fucan oligosaccharide of general formula (VIII), the method comprising allowing the sulfated fucan-degrading enzyme defined by claim 1 to act on a sulfated polysaccharide derived from a brown alga of the order Fucales to produce a sulfated fucan oligosaccharide of general formula (VIII):



- wherein R is H, SO₃H, CH₃CO or general formula (VII); at least one of Rs is SO₃H; n is an integer of 1 or more:



wherein R is H, SO₃H or CH₃CO.

9. The method according to claim 8, wherein the brown alga of the order Fucales is *Fucus vesiculosus* or *Ascophyllum nodosum*.